In November 1891, there arrived in Fort Worth, Texas, a twenty-five-year-old engineer named John MacDonald Blackstock Hawley—or John B. Hawley, as he preferred to be known. He dropped the “MacDonald” from his eight-cylinder name as soon as he was old enough. John’s ancestors were Scots-English border folk and included a pair of baronets, Sir Henry and Sir Francis.

Hawley (1866–1941) was a hydraulic engineer: he designed and supervised the building of waterworks for cities. He came to Fort Worth from his native Minnesota to manage the construction of a new municipal water system. After he finished the job in 1892, Hawley did not go home to Minnesota. What did the Land of Lakes need with a first-rate water engineer? Texas—West Texas in particular—was the place to be if you wanted some really interesting water problems.

Texas was also the place for romance, it seems, for Hawley. Within three years of finishing the Fort Worth City Water Works, he had married a native, Miss Sue Anna Terrell. It was a good match for Hawley. Sue was the daughter of the much-admired Captain J.C. Terrell and Mary Victoria (Lawrence) Terrell. Captain Terrell was a lawyer and a Civil War veteran; Mary Victoria knew Latin, French, Spanish, Greek, and higher mathematics, and was widely regarded as one of the best educated women in Texas.

Hawley hung out his shingle in Fort Worth in 1894, becoming the first independent consulting engineer in Texas in water and
sanitary work, a field known today as environmental engineering. Environmental work proved scarce in the 1890s and early 1900s. One year near the beginning of his career, the only fee Hawley earned as an environmental engineer was about fifty dollars for landscaping the Winfield Scott home (which is now the Fort Worth historical landmark known as Thistle Hill). Another early Texas engineer, W. J. Powell of Dallas, summed up the situation this way: “. . . it would have been hard for a consulting engineer to make a living a hundred years ago in any of [the] principal cities of Texas unless he ran a saloon and gambling hall on the side.”

Hawley did gamble—he played poker and shot billiards—and he did drink, sometimes to excess. But to pull in extra income he stuck to more sober pursuits, like supplying sand and gravel for roads. In search of water work, he traveled the state, engineering a dam for Clarksville in Northeast Texas and a water system for El Paso out west. El Paso’s water problems were political as well as geographical, to judge from a letter that Hawley received from citizen Simon Kinsella. Wrote Kinsella:

[W]hat a time we are having about the Water question, just as if we wanted Water in Western Texas. I don’t use any and I don’t see what other people wants with it. We have no logs to float here. . . . the Council meets three or four times a week and there is not a man in it but pretends to know how good Water tastes and I supose [sic] you have an idea of how often they have tasted Water. . . .”

By 1906, Hawley’s career in water engineering was looking up. A group of New York and Pittsburgh contractors sent him to study the unfinished Panama Canal and recommend whether those contractors should bid on completing its construction. Hawley advised them not to touch it with a ten-foot pole. In the area’s geology he saw a great danger of earthslides, and he predicted that earth tumbling into the excavations would be a constant and costly problem for the canal’s builders. Taking his advice, the group declined to bid. When the U.S. Government went ahead without the aid of
private contractors, its military engineers did in fact encounter problems with enormous earthslides.

Though in his fifties during World War I, Hawley was commissioned a major of engineers and served in France with the American Expeditionary Force, in command of the 503rd Engineer Service Battalion. He was in charge of all water supply for a district in Brittany that was about the size of Massachusetts. One of his projects required four miles of cast-iron pipe, two feet in diameter, which the Quartermaster Corps unloaded with scant regard for the material’s brittleness. Many pipes were cracked but they had to be used anyway, to meet an emergency deadline for water. After the pipes were laid and the water pumps switched on, the pipeline fountained streams and fans of water from all the hairline cracks caused by the rough handling. Hawley’s engineers were troubled by the amount of water being wasted, but they kept the pumps going. The next morning, all were amazed to see that most of the leaks had stopped.

Reported Billings Wilson, Hawley’s supply officer (who went on to become director of the Port of New York): “Investigation showed that we had been pumping millions of tiny eels whose bodies had lodged in the cracks, one on top of another until the leaks diminished to workable limits. Somewhat of a novelty in plugging wholesale leaks.”

After the war, Major Hawley—as he was known from that time forward—hired a twenty-one-year-old M.I.T. civil engineering graduate and Texas native named Simon Freese. One of Simon’s first jobs concerned a new water system the Major had designed for the city of Paris, Texas. Hawley put his new assistant on the train to Madison, Wisconsin, to take the blueprints for the job to Professor Daniel W. Mead of the University of Wisconsin. Professor Mead, an authority on waterworks and power plants and “the best dam man in the country,” was Hawley’s consultant on the Paris project.

Young Simon wanted to make a good impression. Feeling rumpled after his train trip, he stopped by a tailor’s shop to have his pants pressed. In a fitting room, he slipped off his trousers so the presser could touch them up. When his pants were ready,
Simon rushed off to meet the great Professor Mead. But he forgot the blueprints, and left them behind in the fitting room. An impatient Mead had to wait while an embarrassed Simon scurried back to the tailor’s shop to retrieve the plans.

(Were we hoping that Si had remembered the blueprints but forgotten his pants? It would have made the best story, but alas . . .)

Simon Freese was a practical joker. In 1926, while doing work at Corpus Christi, he put on a diving suit and plunged into Corpus Christi Bay to inspect a sewer pipe. His dive was covered by the local newspaper. The paper also reported an octopus seen in the
bay that same day. The octopus was a good seven or eight miles from where Freese was working, but the two newspaper stories didn’t mention that. The reports ran side by side and gave the impression that engineer and octopus had been in the water together. The octopus report also failed to mention that the beastie was a smallish specimen. Freese clipped the two stories and sent them to his fiancée. She was alarmed. She thought he’d nearly been eaten by a giant sea monster. And when she found out differently, she didn’t think it was as funny as Simon did. Their wedding, however, went off as scheduled.

In 1927, Major Hawley made Simon a junior partner and changed the name of the firm to Hawley and Freese. Then Marvin Nichols of Amarillo joined the firm, and the name changed again in 1930 to Hawley, Freese and Nichols. Their big project in those years was to design and build Lakes Eagle Mountain and Bridgeport above Fort Worth. During construction of the dams for the new lakes, Hawley had someone sit up all night by a small hole in the ground until the watcher caught a crawfish emerging from the burrow. Major Hawley wanted to be sure which kind of crawfish it was: the kind that bored vertically, or the kind that bored horizontally. Fortunately, when the crawfish came forth at 3:00 A.M., it was found to be a vertical borer: no threat to the earthen banks of the dam.

One of the Major’s junior partners also had a habit of studying the local wildlife. While Marvin Nichols was assistant city engineer at Amarillo, before joining the firm, he found that prairie dog burrows made pretty good storm sewers during unusually wet weather. In the fall and early winter of 1923, drenching rains interfered with street construction on Amarillo’s Seventh Street between Fillmore and Taylor. The site stayed muddy for two months, and might have stayed underwater all that time except for a prairie dog hole that carried away much of the flood. “Five or six times the water was up to top of curb,” Nichols reported. “A prairie dog hole in the center of the block drained all the water several times, but finally it would not drain anymore.”
Nichols collected bits of local folklore. After he joined Hawley and Freese, he published his notes about Bridgeport Lake, and what was likely to be flooded out as the newly built reservoir filled. “The birth place of Bell[e] Hunt, writer of Texas Verse is inundated by the water of the lake,” Nichols wrote. He continued:

A tribe of Indians under Chief Jim Ned frequented this territory. Originally they were located at the
head of Village Creek which runs into the West Fork of the Trinity River below the Bridgeport Dam. Prior to 1880 they moved over on the mountain which may be seen to the west of the dam. This mountain is now known as the Jim Ned Mountain. Further west a band of Indians under Chief Riley held forth near what is now Wizard Wells. The mountain at the extreme western end of the lake is known as Riley Mountain.

Wizard Wells (at the head of the lake) has a number of mineral water wells. The water is quite similar to that of the wells at Mineral Wells [a more famous health resort town].

It is said by some of the early settlers in this country that the Spaniards left a proverbial “Seven Jack Loads of Gold and Silver” buried in the hills near Wizard Wells. This buried treasure was hunted for as early as 1890 on Village Creek east of the Bridgeport dam to as late as 1929 on Beaver Creek, twelve miles west of the dam. While no definite information has been obtained concerning the exact location of this treasure, it has been definitely determined that it does not lie within the boundaries of the lake, and so will be preserved for future treasure hunters.6

Nichols’ boss, Major Hawley, pursued an interest in folk medicine as the years went on. In his sixties, the Major developed a chronic throat condition that was aggravated, probably, by his fondness for liquor. In 1929 and 1930 he had several bunches of “warts” (papillomata) removed from his vocal cords. The Philadelphia specialist who did the surgery ordered Major Hawley to speak but little, and preferably not at all. That was a mighty tall order, because Hawley was a talker. He got around the gag rule by engaging in a voluminous correspondence, especially with his old friend Daniel Mead of Wisconsin.
Seeking to ease his various aches and pains, Hawley experimented, and he wrote to Mead when he found folk remedies that worked:

As to Lumbago, I have had no severe attack of it for 8 or 10 years, but sometimes it has put me to bed for a week or 10 days. . . . The best thing I have found for it is plenty of sodium bicarbonate alternating with large doses of aspirin. In France [during Hawley’s World War I service] they gave me 20 grains of aspirin every four hours—night and day—for about a week, with good results but one must be sure his heart will stand the aspirin without harm before taking any such heroic doses.

One other thing which gives almost instant relief, such relief lasting for two or three hours, is “cupping” the two offending lumbar muscles, a very simple operation to be applied by some member of the family, one stands nearly upright with his hands braced against the wall; a little wad of tissue paper is lighted and placed in an ordinary glass tumbler, the tumbler is placed against the lumbar muscles. As the burning paper exhausts the air in the glass the skin and flesh are sucked into the tumbler—one-half to three-fourths of an inch, loosening up the fibres of the muscle and relieving the pressure on the sensitive underlying nerves. Two tumblers can be used, treating both lumbar muscles at the same time. This works with me to perfection so that I am able to dance around as I please for a couple of hours.7

In the 1930s, during the Depression, business fell off severely for civil engineers because of drastic cutbacks in construction. By 1934, cash had become so scarce that Major Hawley was forced to drop his fellowship in the American Geographical Society. “I am
sorry to find that I appear to be in debt to the Society in the sum of $20.00, as I am unable to pay it,” he wrote. “Later, if the country gets back to sanity, and if engineers get on better than starvation rations, I will be glad to ‘catch up’ with the dues.”

Engineers weren’t the only ones on a starvation diet. One East Texas lumberman, hoping to supply lumber for one of the firm’s waterworks projects, wrote to Hawley, Freese and Nichols in late 1934: “Now, gentlemen, we lumbermen in East Texas are slowly starving to death. We are forced to live on armadillos, blackberries, and catfish. The blackberries are all gone, the catfish have quit biting, and we are too weak to catch the armadillos; so, if there is a streak of the milk of human kindness in your soul, we are quite sure you will answer this letter.” The author of the letter was a lumberman named, however improbably, Woodhead—Ben S. Woodhead, president of the Beaumont Lumber Company.

As the Depression deepened, Major Hawley was forced to stop helping college students with their school expenses, something he’d done for decades. In reply to one young woman who had asked for his help, Hawley wrote, “It has been my good fortune, during the past forty years, to be in position to loan worthy students money for their college work and post graduate work, but at present there is practically no engineering work for us to do, and I am actually pressed for funds to send my last college son his monthly remittances.”

Business picked up as World War II brought much work for civil engineers. From 1940 through 1945, America saw the construction of troop quarters, military training camps, air bases, naval stations, shipyards, and plants to make airplanes, ammunition, and other articles of war. In 1940, Freese and Nichols won an assignment from the army to design and supervise construction of Camp Barkeley, nine miles southwest of Abilene. Major Hawley had retired in 1937, at age 71, and so the firm had by this time adopted its present-day name of Freese and Nichols.

Camp Barkeley was built in record time. Within ninety days, by mid-February 1941, the 20,000-man army camp was complete.
Troops were trucked in from Fort Sill, Oklahoma, commanded by Col. Jess Larson. Colonel Larson was the ex-mayor of Chickasha, Oklahoma, and a personal friend of Marvin Nichols. After Larson’s Fort Sill division moved to Camp Barkeley, Freese and Nichols discovered they had made a terrible blunder. Colonel Larson’s flag flew higher than the flag of Gen. Walter Krueger, commander of the Third Army. An investigation showed that Larson’s flagpole was shorter, as military protocol required, but it was set on higher ground, so that the Colonel’s flag overtopped the General’s. Nichols worried that the General would think the breach of etiquette was intentional, since Colonel Larson was the only man in camp Nichols knew personally.

Major Hawley did not live to see the United States enter World War II. But during 1940, the last full year of his life, he closely followed what he called the “Hitler-Mussolini-Stalin war” and
formed a definite opinion of how best to deal with the three dictators. “My own notion,” he declared, “has been to offer a ‘bonus’ of $100,000,000 each for the heads of the brutes, believing that it would get prompt and efficient results. (The war is costing $100,000,000 per day, so why not? Three days would account for it.)”

11 In hindsight, one tends to wonder if he didn’t have a pretty good idea.

John Hawley died in the early hours of January 9, 1941, at his home in Fort Worth. His wife, Sue, accompanied the body to San Antonio for cremation. As the Major had requested, there were no funeral services or flowers.


**Endnotes**

2. Simon Kinsella. Letter to J. B. Hawley, October 29, 1902.
6. Ibid.
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